NEW FORMS OF CONIONTIS (COLEOPTERA)

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During the past few years certain species of Coniontis have become of economic interest, as they have been found to injure garden crops. I am indebted to Mr. Roy Campbell of the Experiment Station at Alhambra, California, for several interesting phases of Coniontis and Blapstinus; also, to Mr. Louis Slevin of Carmel, Monterey County, and Mr. Warwick Benedict of Santa Monica, for specimens taken at Carmel and vicinity of Point Conception.

A general review of the species of Coniontis is being prepared, with the view of establishing the status of many of the described phases so that they can be more intelligently dealt with in the field. At the present time I shall make known one new species and two races.

Coniontis globulina ventura Blaisdell, new variety

In the Entomological News of January, 1918, page 9, I described Coniontis muscula as a race of globulina Casey, and on page 14 discussed the peculiarities of globulina. At the present time it is quite evident that the intermediate phase between globulina and muscula should have a distinctive name. This is of practical importance from the economic standpoint on account of the growing importance of understanding the relation of the Coniontis phases to each other, as they have been found injurious to young beans and beets. The following varietal definition of ventura is now given:

Form elongate suboblong-oval, parallel as compared to muscula, and strongly convex. Color dark nigro-piceous; legs and antennæ rufous, at times somewhat darker; surface lustre rather dull. Pubescence fine, rather abundant, decumbent but not hiding the entire surface, moderately easily removable and pale flavate in color, varying more or less from paler to deeper yellow; conspicuous in fresh specimens.

Head and pronotum finely punctured, punctures separated by a distance equal to two or three times their diameter. Antennæ rather short, extending to slightly beyond the middle of the pronotum.

Mentum feebly and sparsely punctate, basal impressions rather shallow and extending broadly on to the lobes; about a fourth wider than long; apex subtruncate.

Elytral surface more or less slightly rugose apically, subtumes-

cent lines sometimes obsoletely indicated; very finely punctate. Sides of the body continuously arcuate from the head to the elytral apex in the female; in the male the pronotum may be a little wider.

Beneath finely sculptured; abdomen very finely and sparsely punctured. Prosternal process narrow, finely and sparsely punctate, more or less margined between the coxæ, but not at tip.

Length (types), 9-10 mm.; width, 3.5-4.6 mm.

Holotype, female, No. 1593, and allotype, male, No. 1594, in collection of the California Academy of Sciences. Paratypes in the Academy's and the author's collections, and in that of the American Entomological Society in Philadelphia. Type locality, Ventura, California.

Ventura is very abundant in Ventura County, especially in the vicinity of Oxnard. I am indebted to Mr. Roy E. Campbell of the United States Department of Agriculture Station at Alhambra, California, for specimens from other localities.

In *C. ventura* the mentum has the basal impressions distinct and confined to base; sides slightly arcuate; apex broadly but not deeply sinuate; angles blunt and distinct; surface sparsely punctate, very distinctly so in apical half where it is flat; prosternal process sparsely punctate and more or less margined at the sides. In *muscula* the mentum is rather short, transverse, with the basal impressions obsolete; sides moderately arcuate; apex broadly and feebly sinuate, angles obtuse and not prominent, lobes not indicated; disc feebly convex, sparsely and more or less obsoletely punctate. Prosternal process sparsely punctured and more or less margined at the sides.

Muscula is more broadly oval and not elongate, globulina is extremely short and stout, both being clothed with coarse decumbent hairs. Microsticta is narrower and less robust than ventura, with pubescence finer and more easily removable (cabinet specimens being generally quite denuded) and the sides of the pronotum are more convergent from base to apex. In ventura the sides are less convergent and more parallel in basal two-thirds, thence more strongly convergent. In microsticta the mentum is more or less distinctly emarginate at apex. Inconspicua Casey is not different from microsticta Casey.

In the genus *Coniontis* the specific units cannot be positively identified from detailed descriptions, for there is no other group in the coleoptera where the individuals vary to a greater extent. They must be recognized from general appearance or

habitus. Locality is of the greatest value and species described from types without definite locality should not be recognized. This statement will appear radical to some, but I have found that the units or individuals of one species frequently resemble those of another species. It so happens that no two related species inhabit the same geographical area: About San Francisco is found eschscholtzii, nemoralis, viatica, and microsticta; in Marin County viatica, obsidiana, nemoralis, puncticollis, sanfordi, and subpubescens; in Calaveras County blaisdelli, sanfordi, and montana. The variations between the individuals of viatica, obsidiana, and blaisdelli are apparently without limits. Therefore, if an example of viatica should not bear a definite locality label it could be referred to obsidiana, if it happened to be unusually large and oblong; or the reference might be to blaisdelli if it was slightly broader than usual and with the pronotum relatively wider than the elytra. It can readily be seen that a composite series would be formed in a collection. This is most apt to happen when details are depended upon for specific separation rather than general appearance or habitus. During the past decade I have examined hundreds of specimens and know whereof I speak. Arrange the specimens of two species according to the block system and compare the two. It will be noted that the specific differences will be accentuated and obvious.

Coniontis lamentabilis Blaisdell, new species

Form oblong-oval, cylindrical, less elongate than *ventura* and *microsticta*, more obtusely rounded anteriorly and posteriorly. Color nigro-piceous; legs more or less dark rufous, antennæ rufopiceous. Pubescence conspicuous, sparse and decumbent, pale flavate to plumbeous in color, and in certain lights silvery or golden.

Head sparsely and finely punctate, epistoma more densely punctured; frontal and oblique sutures usually distinct. Pronotum and elytra finely and not closely punctate, sides of the former parallel in basal half, thence arcuately and feebly convergent to apex. Elytra more or less slightly rugose about the apex, and at times tumescent lines are obsoletely indicated; lateral margin, in female, forming a continuous line with that of the pronotum; in the male the pronotum is usually somewhat wider at base.

Prosternal process usually margined only between the coxæ, surface sparsely and finely punctate. Parasterna and abdomen finely and sparsely punctate.

Male. Pronotum slightly wider than in the female. Form sometimes slightly cuneiform.

Length (types), 7 mm.; width, 9-2.9 mm.

Holotype, female, and allotype, male, and two paratypes in my own collection. Types and one paratype were collected at San Diego, the other paratype at Pacific Grove, Monterey County, California, all by myself.

In lamentabilis the mentum is transverse, about a half wider than long, with the apex transverse and more or less feebly sinuate; surface rather more roughly sculptured than in ventura and microsticta. It differs from these, also, in being shorter, more cylindrical in form and in being rather more obtuse anteriorly and posteriorly. Parviceps and muscula are broader, the former oblong-oval, the latter oval.

In lamentabilis I have observed a distinct molar at base of both mandibles within, similar to those described by me in Eleodes (Bull. 63, U. S. Nat. Mus.).

Coniontis nemoralis slevini Blaisdell, new variety

The California Academy of Sciences and the author are indebted to Mr. L. S. Slevin of Carmel, Monterey County, California, for a series of specimens of a phase of *Coniontis nemoralis* Esch., which show a noticeable divergence from the typical form. Heretofore it has been referred to *nemoralis*. When studied in a block system arrangement its differences stand out to such an extent that no doubt is entertained as to its claim to varietal standing.

Female. Form moderately elongate-oval, less robust than nemoralis, and more convex. Color dark nigro-piceous; legs and antennæ more or less dark rufo-piceous; surface smooth and moderately shining. Pubescence inconspicuous, consisting of sparsely placed and very short, soft hairs as in nemoralis.

Head finely and sparsely punctate; epistomal apex broadly, subtriangularly emarginate; emargination shallow and rounded at bottom. Pronotum very minutely and sparsely punctate, punctures more or less obsolete in the central area. Elytra very finely punctate, punctures inconspicuous; disc slightly rugose on the apical declivity. Epipleura narrow and subequal in width in basal two-thirds.

Prosternal process narrow, not margined and very sparsely, finely punctured; elsewhere beneath finely and not very distinctly punctate. Otherwise as in *nemoralis*.

Male. Rather narrower than the female, sometimes subcuneiform.

Length (types) 9-10.6 mm.; width, 4-5 mm.

Holotype, female, No. 1595, and allotype, male, No. 1596, in the collection of the California Academy of Sciences. Paratypes in the Academy's collection and in that of the author. The types were collected at Point Lobos, near Carmel, Monterey County, California, on August 1, 1919.

In *slevini* the mentum is transverse with basal impressions; disc coarsely punctate; sides moderately arcuate, apex broadly and moderately deeply emarginate; emargination nearly rounded at bottom; angles of the lobes blunt, scarcely at all rounded. In *nemoralis* the mentum is similar in form, with basal and other impressions and coarsely punctate; angles of the lobes rounded; emargination almost subtriangular. Prosternal process not margined (female) or more or less margined (male), with surface sparsely punctate.

A NEW CENTRIOPTERA FROM TEXAS

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In the Proceedings of the California Academy of Sciences, Fourth Series, Vol. VII, No. 12, July 10, 1923, page 251, I gave a synoptic table of the species of Centrioptera. In that table was included the species described below; the synoptic statement gave only the salient characteristics. At that time all of the known species, with the exception of *utensis* Casey had been at hand. Since the appearance of the synoptic table two new species have been described by Colonel Casey in his Memoirs on the Coleoptera XI, 1924. His *serrata* from Las Vegas, Nevada, is unknown to me, but, from the attending remarks regarding it, must be closely related to *muricata* Lec.

I have received many specimens of muricata Lec. from La Puerta on the border of the Colorado Desert, Imperial County; also, from Palm Springs and Eastern San Diego County, California. It is true, as in all species, there is a marked variation in size and strength of sculpturing. These variations occur in a series from any one locality and are individual and ecological (forms). My own series demonstrate these facts. The larger specimens are more strongly sculptured than the smaller ones. I consider elongata Casey, recently described, as not even varietally different from muricata Lec.